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	Page	
New Spurt in Land Values	2	
Who Is in the Land Market	3	William H. Scofield
How's the Weather	5	John C. Scholl
The New Agricultural Ladder	7	Marshall Harris
Plan Needed for Grass Program	9	W. M. Myers
Changes in City Diets	11	Faith Clark, Esther Colvin
Letter to Crop Reporters	13	S. R. Newell
Mothers Prefer Cotton	13	Rita Hausknecht
Outlook Highlights	14	

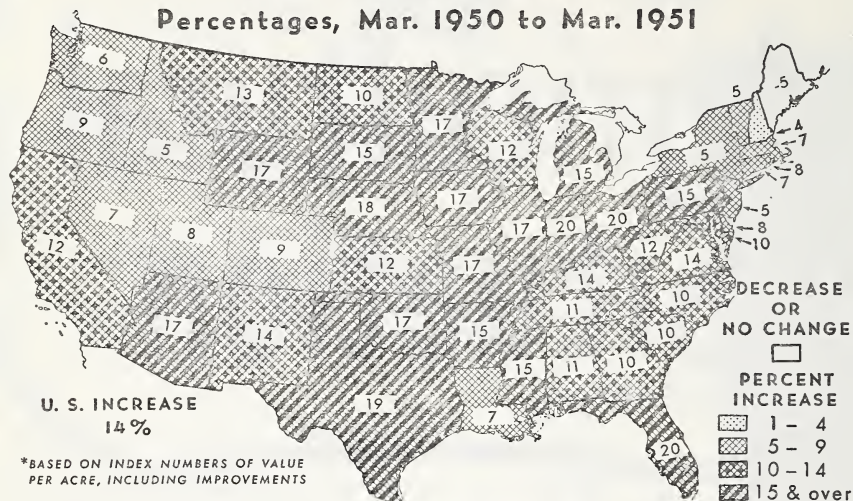
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CHANGES IN DOLLAR VALUE OF FARM LAND*

Percentages, Mar. 1950 to Mar. 1951



U. S. DEPARTMENT OF AGRICULTURE

NEG. 48101-XX BUREAU OF AGRICULTURAL ECONOMICS

New Spurt in Land Values

FARM REAL estate values in the country as a whole rose 14 percent during the year ending March 1951. Increases of 10 percent or more in two-thirds of the States raised the national index to 193 (1912-14=100), 15 percent above the postwar low in November 1949 and 9 percent above the previous high in November 1948. In 11 States, most of which were in the Midwest, the increases during the year ending this March were the largest for any comparable period since 1920. Only 11 States have a current index that is still below the 1920 peak.

The largest gains during the year were centered in the Midwest, extending from Ohio westward to South Dakota and Nebraska, but a number of States outside the Midwest, especially Florida, Texas, Oklahoma, Wyoming, and Arizona, also showed comparable increases. Smallest increases were reported for several of the New England, Middle Atlantic, and Northwestern States. Maine was the only State to show a decline and this was due pri-

marily to prospects of lower returns from potatoes. In Florida, continued strong demand for land for citrus planting, favorable returns from producing groves and expanding livestock production all contributed to the record increase of 20 percent for that State.

Over half of the increase for the country as a whole during the last year has occurred since last November. The national index rose 2 percent from March to July 1950, 4 percent from July to November, and 8 percent from November to March 1951.

Preliminary estimates of the rate of voluntary sales of farms during the year ended March 1951 show a moderate increase compared with a year earlier. The volume of voluntary sales was down slightly in the New England and East North Central regions but all others showed increases. The rate for the country as a whole was estimated at 39.4 farms per 1,000 or 6 percent above the rate for the previous year; it is still about one-third below the 1946-47 peak.

WHO is in the land market?

ANYONE WHO has been shopping for a farm in recent months has probably observed at least two things about the present farm real estate market: First, the scarcity of the better farms for sale, and second, substantially higher prices than a year ago. They have probably noted also that a lot more people are looking for farms than was the case a year or two ago. What classes of buyers are contributing to the current strong demand for farms, and who holds the farms that are for sale?

Although the majority of the transfers of farm property are between farm people living in the same community, several other classes of buyers are important in the land market in some areas. In the Northeast and Southern Appalachian areas, for example, the nearness of urban centers and industrial employment makes part-time farms and rural homes both attractive and practical for city workers. The rapid population growth in the West Coast States has had a similar effect on prices of farm land within commuting distance of towns and cities. In the Midwest and in parts of the Southwest farm land offers investment opportunities for nonfarm capital.

Investment a Factor

The total amount of farm land that is sold as a result of these special demand factors is not large, but it is often sufficient to influence land prices in local areas, particularly during some periods. Reports from a March survey of farm real estate reporters indicate that demand for farms as an investment has again become an important market factor in the better farming areas. The desire to invest surplus funds in land, both as a hedge against inflation and as a source of income, is not limited to nonfarmers, of course, as farmers who already own land are also an important class of buyer. In many cases they have bought additional land in order to make better use of new machinery. At least a part of the substantial decline in the number of farms in the United States between

1945 and 1950 has resulted from the consolidation of the smaller farms into larger units.

The best specific information available concerning who is buying and selling farm land is obtained from an analysis of actual sales of farms that are obtained in an annual survey of farm real estate reporters. These sales data include acres, price paid, financing arrangements, occupation of buyer and seller and other items. Results from these surveys, which were begun about 1928, do not permit a detailed study of numerous special situations in local areas, but they give an overall indication of the major classes of buyers and sellers in the various geographic divisions.

Farmers Buy Two-thirds

During the last 20 years, active farmers bought about two-thirds of the farms sold and nonfarmers bought the remaining one-third. The proportion bought by farmers dipped sharply during the early 1930's, and nonfarmers showed a corresponding increase during this period. The total number of farms changing hands by voluntary sale was relatively small during those years, however, and nonfarmers acquired a large number of farms as a result of foreclosure and related means in addition to those purchases. Following the 1933 low point when the proportion bought by farmers declined to 53 percent of the total, the figure rose rather steadily until it reached 67 percent in 1941. Since then it has remained fairly constant at about two-thirds of all sales. The proportion bought by nonfarmers has shown a slight downward trend since 1945.

Preliminary data from about 17,000 sales obtained in the March 1950 survey showed no significant changes from the preceding several years in the relative importance of the various classes of buyers and sellers. With respect to buyers, the 1950 data showed that for the country as a whole, 31 percent of the sales reported were bought by tenants, 41 percent by farmers already owning land, and the remaining 28

Farm Real Estate Transfers

Geographic division	Type of buyer			Type of seller		
	Farmers		Non-farmers	Farm-ers	Es-tates	Others ²
	Ten-ants	Owner-oper-ators ¹				
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
New England.....	16	40	44	71	10	19
Middle Atlantic.....	20	34	46	70	14	16
East North Central.....	32	38	30	67	16	17
West North Central.....	40	44	16	65	18	17
South Atlantic.....	21	40	39	66	18	16
East South Central.....	31	39	30	70	12	18
West South Central.....	28	38	34	67	14	19
Mountain.....	25	53	22	76	9	15
Pacific.....	16	48	36	75	7	18
United States.....	31	41	28	68	15	17

¹ Includes a small percentage of retired farmers.

² Includes a small number of sales by lending agencies and county, State, and Federal Government. For the United States such sales amounted to only 1.6 percent of all sales.

percent by nonfarmers (table 1). However, there were some regional differences that are worth noting. Nonfarmers were listed as buyers for about 45 percent of the sales reported in the New England and Middle Atlantic States, and for 39 percent of the sale in the South Atlantic States. They made the smallest proportion of the purchases in the West North Central and Mountain regions. Regions showing the largest proportion of tenants as buyers include the West North Central, at 40 percent, and the East North Central, and East South Central which averaged slightly over 30 percent.

Farmers Main Sellers

Classification of sales according to the occupation of the seller also shows farmers as the largest group, especially since 1940. Prior to that date, and in some areas as late as 1942, lending agencies and others who had acquired a large number of farms by foreclosure in the 1930's were an important class of seller. Practically all of such farms had been disposed of by 1946, however, and the proportion of all sales made by this group has seldom amounted to

more than 2 percent each year since then. About two-thirds of all sales reported since 1946 have been made by farmers, and in 1950 they made 68 percent of the total. Estates sold 15 percent and others, mainly nonfarmers sold 17 percent. Regional differences are less apparent than in the case of buyers, but estates appear to be of somewhat greater importance as sellers in the East and West North Central and South Atlantic regions than elsewhere.

Fewer for Sale

Many of the factors responsible for the current strong demand for farms also serve to limit the number of farms on the market. Replies from the March 1951 survey indicated a sharp reduction in the number of farms listed for sale. Present owners are reluctant to sell, even at current prices, because of the higher level of farm income in prospect and the lack of other investments that would pay as well. Consideration of the amount of income tax payable in case of sale is also a factor in some cases.

William H. Scofield
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How's the Weather?

Farmer's Judgment Main Basis For Forecasting Crop Yields

THROUGH the ages farmers have searched the skies for clues to approaching weather. For weather can spell bounty or failure for the farmer's crops. Many farmers have become good forecasters. They have learned the meaning of shifting winds, different cloud types, temperature and pressure changes, and other indicators of the weather.

Part of the weather lore that farmers have accumulated has its roots in science, part of it in legend. Many people still base their weather forecasts on "signs." One popular belief is that a drought will not be broken until the moon changes; another that a moon with horns pointing down indicates approaching showers. Another saying goes: "Plant potatoes in the dark of the moon, plant corn in the light of the moon, and shear sheep when the moon is waxing."

Key Still Missing

The legends of the past haven't provided the key to the weather of the future. Neither has science, though the problem has been studied from many angles. A common approach is based on the belief that certain types of weather tend to occur in a cyclical manner. Some research workers feel, for example, that wet and dry periods are associated with certain astronomical conditions. Efforts have been made to discover patterns of rainfall that correspond with sunspots—the assumption being that the amount of energy received from the sun influences the amount of rain that falls.

Others believe that one extreme tends to follow another—for example, that a wet year usually follows a dry year. On the other hand, other investigators feel that very wet, or dry, weather tends to persist over a period of years.

Individual studies have seemed to support one or more of the above patterns for a particular group of years;

however, most reliable studies made thus far indicate that such weather patterns as may exist are only of limited value for forecasting changes in weather for any given year. As a result, farmers must depend primarily on "short-term" forecasts in planning their operations.

Those engaged in forecasting the yields of crops also would benefit greatly if more were known about the weather. This is particularly true for the Crop Reporting Board here in Washington. The Board collects information on the condition of all important farm crops during the growing season from thousands of farmer crop reporters. Then, on the basis of the reported crop conditions and certain assumptions about the weather, it forecasts final yields. The assumption usually made about the weather is that average weather will prevail during the rest of the growing season.

Forecasts Would Help

Obviously, the Crop Reporting Board would profit immensely by having reliable weather forecasts from the time a crop's condition is reported until harvest time. Even fairly accurate long-range weather forecasts would help a great deal. However, knowing what the weather is going to be would not solve the whole problem. It still would be difficult to determine in advance the effects of various types of weather on yields during a growing season.

The types of weather that crops need during the various growth stages are generally known. However, an examination of past weather records, together with estimates of yields during a season, indicate that it is difficult to determine how much crop yields are affected by various types of weather. This is primarily due to the fact that the effects of weather on a crop at any given time depend to a large degree on the weather

before and after. For example, a wet, cold spring may be completely overcome by favorable weather later in a season. On the other hand, crops may get off to a very good start but later be seriously retarded by adverse weather.

The effect of weather on some crops is particularly difficult to determine. Burley tobacco is a good example. During wet years, the leaves grow large and succulent but weigh out relatively light. But in dry years, the smaller leaves are surprisingly heavy. Consequently, the effects of wet or dry growing seasons sometimes are not fully reflected in the average conditions reported by crop correspondents. Cotton, peanuts, and sweetpotatoes provide similar problems. During wet seasons, the luxuriant growth of the vine or plant sometimes suggests more favorable prospects for yields than actually exist.

The Crop Reporting Board is continuing to study the effects of weather on crop yields. One of the things that has been found is that pasture conditions most nearly reflect the effects of weather. This fact is useful as an aid in forecasting yields of crops, such as tobacco, cotton, peanuts and sweetpotatoes whose condition during the growing season is sometimes difficult to determine.

Rainfall a Clue

An important clue to the final yield of some crops is the total amount of rainfall during a month or combination of months. Probably the best example is wheat in the southwestern plains and in some extreme north central parts of the country. In these areas, the subsoil moisture at seeding time plus the rain that falls during the certain parts of the growing season are important factors contributing to wheat yields.

Another method has proved useful in studying the effects of weather on yields. This consists of classifying each of a series of crop seasons on the basis of the average rainfall and temperature during each month of a season. The effects of weather during a current season can then be estimated by comparing yields during years having a similar weather pattern. This approach has worked fairly well.

Some Factors Missing

Better relationships between weather and crop yields could be obtained if all weather factors—temperature, humidity, and others as well as rainfall—were considered. For instance, the effect of rain depends not only on the amount that falls but on the rate it falls, the temperature at the time and other factors. However, not enough information is available nor has enough research been done to determine the effects on yields of the various combinations of factors that make up the weather.

The crop-weather field is extremely complicated. Although much has been learned about the effects on final yields of the various types of weather that occur during a growing season, much more remains to be learned. The Crop Reporting Board is continually making efforts to use fully the relationships between weather and crop yields that have been established and to discover other relationships that may improve the forecasting of yields.

In the final analysis though, the Crop Reporting Board must depend largely on the judgment of crop correspondents in predicting the effects of weather and other factors contributing to crop yields. The farmer crop reporter is, and will remain, the mainstay of the crop estimating system.

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AGRICULTURAL LADDER

MORE FAR-REACHING changes have taken place in American agriculture during the last two decades than in any previous half century of our national existence. Changes in the physical side of farming have been more obvious than those in the economic and social framework within which the farmer must carry on his operations.

Yet in recent years many economic and social arrangements have changed to a marked degree. These changes are exerting a profound impact upon rural America. Among them is a new agricultural ladder which many young farmers are using to reach their ideal of farm home ownership.

The desire to own the land that they till has been strong in the American farmer since early colonial times. The great trading companies and others who obtained large grants of land from the King gave it to those who would come to America and settle upon it. Climbing the agricultural ladder during the colonial period and for the first century of our national life depended heavily upon free land. Progress up the ladder was represented by adding buildings to the land, enlarging the house, clearing and improving the farm, increasing the herds and flocks, and perhaps acquiring another piece of land.

Old Ladder Had Five Rungs

After the free land had largely disappeared the climb to ownership was a quite different process. Many owners started as unpaid family laborers on their home farms and gained skill and experience in farming. Then they became hired workers, either at home or in the community. This way they saved enough cash to climb to the third rung on the ladder—tenancy. After several years as tenants, they accumulated enough to buy a family farm by making a substantial down payment and giving a mortgage for the remainder. Finally they paid off the

mortgage and became full and unencumbered owners.

Thus the climb to ownership was on a ladder made up of five major rungs—unpaid family laborer, hired worker, tenant, encumbered owner, and full owner.

During the last decade or so a new agricultural ladder has been emerging—a ladder designed to keep the farm in the family. This ladder may be thought of as an extension ladder of two sections. The part next to the ground we may call the *operating agreements* section, while the top part is the *transfer arrangements* section.

Begins With Project

The operating agreements phase is made up of three rungs that we will label (1) project agreements, (2) apprenticeship, and (3) partnership. The transfer phase has two rungs—(4) transfer arrangements and (5) full ownership. Chief among the factors that have given rise to the new process are: the larger size of farms, the increased investment in livestock, and the widespread use of expensive machinery.

While on the operating section the son (or son-in-law) gains experience in farming; gets a taste of ownership, control, and management; is introduced to risks by sharing in profits and losses; and makes progress in the accumulation of working capital. When he has climbed to the transfer section he takes over more of the management, acquires a greater degree of ownership in the personal property, and develops arrangements looking toward eventual ownership of the farm.

The unpaid-family-laborer rung on the old agricultural ladder is being replaced by project agreements—those involving 4-H Club and FFA projects, for example. In some cases, a monthly wage allowance is made to the son from which he buys his clothes, takes his spending money, and adds to his savings. Working relationships at this

level may be either formal or informal and may relate to a single animal or piece of land or to several farm activities. The supervision and teaching processes are divided between the father and the 4-H Club leader or the agricultural teacher. The boy is introduced to farming as a part of his education.

A "Testing Period"

The hired-man rung on the old ladder is being replaced by a more substantial enterprise agreement under which a son shares in the ownership of some of the operating capital, furnishes his part of labor and management, and shares in income from the enterprise. This is the "testing period" during which the son gains real farm experience, decides whether he would like to farm, and accumulates additional capital.

The tenancy rung on the old ladder is being replaced by a full-fledged operating contract or father-son partnership under which the son owns part of the working capital, shares in the management of the entire farm, and is responsible along with his father for all aspects of the farm business. Savings accumulated by the son are plowed back into the business. The son gradually acquires much or all of the working capital, assumes a greater part of the management, and takes a larger share of the farm income. In the latter stages, the operating agreement may shift from a partnership to a related tenancy type.

The encumbered ownership rung of the old ladder is being replaced by the first stages of the transfer process under which the son obtains a specific ownership claim in the farm business. This claim may not result in full ownership until after the father's death, when the inheritance process is completed. The son usually acquires ownership of most or all of the personal property, takes over all or much of the management, and may begin to buy in on the land and buildings.

The full ownership rung of the new ladder is attained when the son takes over the home farm as his own.

The old labor-tenancy-ownership ladder has not been replaced completely by the new operating agreement-transfer arrangement ladder. Far from it. But the replacement process has been started, and it is gaining momentum. As yet, however, the climbers of the new ladder are few, but the growth is steady and sure. Its use will be slowed down if farm income should decline drastically and farm labor become plentiful. It will be accelerated by greater mechanization, an increase in size of farms, and a shortage of farm labor.

The climbers of the old ladder have been few. A recent nation-wide land ownership survey found that less than one owner in six had attained ownership via the labor-tenancy-ownership ladder. It is estimated that the new ladder may be adapted to at least an equal proportion of all farmers. The major limiting factor in the long run is the large number of small farms—too small to support two families.

Fits Current Situation

The new ladder appears to be well adapted to current agricultural developments as they unfold. Many farm families are interested in this procedure for keeping the son on the farm and the farm in the family. Several State experiment stations and extension services have published material on this subject.

Two recent publications by E. B. Hill and the author—one dealing with the operating rungs on the ladder and the other with the transfer phase—have been sponsored by the North Central Land Tenure Committee. The one on Family Farm-Operating Agreements has been published by the Michigan Agricultural Experiment Station, while the one on Family Farm-Transfer Agreements is being published by the Illinois Agricultural Experiment Station. U. S. D. A. Farmers' Bulletin 2026, entitled "Father-Son Farm Operating Agreements," by Max M. Tharp and Harold H. Ellis, is in preparation.

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Planning Needed To Get Most From Farm Grassland Program

RESearch and the experience of farmers provides convincing proof that grassland improvement can increase production on many United States farms.

To provide maximum benefits, a grassland improvement program for a farm must be well planned in all phases. It is not enough to establish improved species of grasses and legumes in rotation and permanent pastures. The pastures also must be managed properly if economical production of livestock feed is to be obtained.

A major goal of pasture management is to provide uniform production throughout the grazing season. No single pasture combination will meet this requirement. However, by using combinations of species to provide pasturage at various seasons, controlling grazing and using surplus pasture herbage properly, it is possible to maintain forage supplies at a fairly constant level.

Experiments on grazing have shown that in many cases rotational grazing has decided advantages over continuous grazing. In the most common type of rotational grazing, the pasture area of the farm is divided into three, four or more pastures each of which is grazed in turn by the entire herd and then allowed to recover while the other pastures are being grazed.

Essential for Some Species

Rotation grazing is essential on the rotation pastures planted to such species as brome grass, orchard grass, Ladino clover and alfalfa. It is the only means by which these species can be maintained in the pasture mixture. Rotation grazing also has proved to be economically desirable as well.

Results of experiments on rotation grazing are less conclusive for permanent pastures of the Northern area which consist predominantly of Kentucky bluegrass and white clover. Although increases in production of digestible nutrients up to 10 to 15 percent have been realized, the gain often is not economical because of the costs of fencing, water, and handling live-

stock. Nevertheless, these experiments suggest that on highly productive permanent pastures, rotational grazing is desirable if the additional costs are not high. This is particularly true where electric fencing can be used and the water supply is not a problem.

Another type of rotational grazing by which decided increases in beef production can be obtained involves the use of pastures for spring and fall grazing and other pastures for midsummer grazing. In the first case, species of grasses and legumes are used that grow best in the spring, become unproductive in midsummer, and recover with lush growth in the fall. The summer pasture on the other hand, consists of species that grow best in hot weather.

Grazing Intensity Varies

The intensity with which a pasture should be grazed varies with the species. Close grazing of the Kentucky bluegrass-white clover permanent pasture may be necessary for satisfactory maintenance of the white clover. On the other hand, equally close grazing of mixtures containing brome grass, Ladino clover and alfalfa would prove disastrous to stands of these species. Restricted rotational grazing is one of the keys to maintaining Ladino stands and to the successful use of alfalfa as a grazing plant.

Use of the surplus production of pastures is another important factor in a farm grassland program. Production of all pastures fluctuates with temperature, soil moisture, the life cycle of the plants and other factors. Since the needs of grazing animals continue at an almost constant level, surplus herbage will be produced during high production periods. In using this surplus, both the welfare of the livestock and the effects on future pasture production must be considered.

It is a common practice on farms where pastures are used for beef cattle grazing to leave the surplus herbage on the pasture, since beef cattle can use the surplus satisfactorily. However,

this procedure is not suitable for young, growing animals or for milking cows. To maintain a high level of milk production from cows that depend on pastures for a large part of their nutrients, a constant supply of succulent and nutritious new growth is required. Milk flow declines abruptly as the pasture herbage matures. Consequently, it has been found necessary to remove the surplus by mowing. The surplus is preserved as hay or grass silage to provide feed for periods when pasture production is deficient.

Mowing Sustains Production

Mowing also is desirable to maintain the sustained productive capacity of pastures. For most economical feed production and greatest benefits to the soil, a mixture of grasses and legumes is required. Through most of the humid area, legumes are more difficult to keep in the mixture than are grasses. Where surplus growth is allowed to remain on the pasture, the hazards of losing the legume from excessive competition from the grass is greater.

Mowing helps control weeds and promotes uniformity of grazing. Where rotational grazing is practiced, the pasture usually is mowed two or three days before the animals are removed. Cattle will consume much of the wilted and dried forage cut off. In experiments testing the effects of mowing, the total digestible nutrients yielded by the mowed pasture were 23 percent greater than for the unmowed.

For preserving the surplus mowed from pastures, both grass silage and barn dried hay are superior in quality to field cured hay. Grass silage and barn dried hay are about equal in terms of dry matter preserved, protein content and milk yields per acre. One experiment showed that grass silage and barn dried hay yielded about 53 pounds of total digestible nutrients per 100 pounds of dry matter compared with 64 from fresh pasturage.

In general, the management practices for pastures on irrigated lands are similar to those for pastures in humid areas. One of the most common errors is to use too much water. This results in the establishment of moisture loving plants such as sedge

and thus lowers the quality of the forage.

Supplemental irrigation of pastures in humid areas to maintain them during droughts has received considerable attention in recent years. Results on the general economy of this practice are not yet conclusive. However, the benefits of supplemental irrigation may exceed the cash expenses for application on farms which already have irrigation equipment and a water supply.

Grassland management programs designed to provide uniform pasture production throughout the grazing season will vary from farm to farm because of difference in the needs of farms, climate and many other factors. On most farms, however, there is a considerable acreage of permanent pasture, or of land that can most profitably be maintained in permanent pastures. On such farms, the program may well be planned around these permanent pastures.

Main Features

Important features of planned production on such farms are:

- Manage the permanent pastures to obtain maximum economical production and manage the grazing to provide, as nearly as possible, complete utilization of the herbage as it is produced.

- Mow and preserve excess herbage from the permanent pasture when possible.

- Plant rotation and renovated pastures to species that can be harvested for hay or grass silage or grazed, depending on the condition of the permanent pastures.

- Use annual species as supplemental pastures to provide as much grazing as possible during periods when production on the permanent and rotation pastures is inadequate.

- Preserve sufficient herbage as silage and hay to feed the livestock when pasturage cannot be provided.

These principles also apply in general to farms with inadequate acreage of permanent pastures except that rotation pastures must be depended on for grazing to a greater extent.

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Seasonal Changes in City Diets Smaller Than Formerly

WITH MODERN transportation, refrigeration, and processing of foods, the kinds and amounts consumed by city families in different seasons of the year vary less than was true some years ago. Of course, certain food—strawberries and asparagus, for instance—are still “in” or “out” of season. And many people still think foods like rich pastries, gravies, and cheese, are too “heavy” to eat in summer.

Spring Nearest Average

In 1948 and 1949, the Bureau of Human Nutrition and Home Economics made surveys of housekeeping families in four cities—Birmingham, Buffalo, Minneapolis-St. Louis, and San Francisco—to find out their seasonal patterns of food consumption. From these surveys they worked out the seasonal patterns for city families generally.

Among the seasons, the Bureau found

that in spring consumption of food is more nearly like the annual average pattern than is true of any other season. Among the different food groups, consumption of fruits and vegetables showed the biggest fluctuation so far as season was concerned.

Milk and milk products as a group showed little seasonal change but this was not true for the individual items that make up the group. Although about the same amount of fluid milk was consumed throughout the year, consumption of cheese was highest in winter and lowest in summer. Consumption of ice cream was just the reverse, with the seasonal high in summer and the low points in winter and fall.

Meat Consumption Steady

Meat, poultry, and fish—in total—were used in stable amounts the year round, although less beef and fresh

Urban Food Purchases

Food item	Yearly average—100			
	Winter (Dec.— Mar.)	Spring (April— June)	Summer (July— Aug.)	Fall (Sept.— Nov.)
Milk (total fluid milk equivalent) ¹	² 105.5	98.8	² 94.7	97.2
Fats and oils ¹	102.3	98.7	97.2	100.1
Flour and cereal foods ¹	² 110.0	97.5	² 89.2	² 96.2
Bakery products ¹	100.9	96.7	² 95.9	² 104.8
Eggs.....	102.9	² 106.4	² 91.5	95.4
Meat, poultry, fish ¹	² 103.8	99.9	² 93.7	99.2
Fish and shellfish.....	² 109.2	101.4	² 92.0	² 91.8
Sugars and sweets ¹	² 109.1	² 93.3	² 93.3	99.1
Fresh fruits ¹	² 80.9	² 81.4	² 177.1	² 92.8
Potatoes and sweetpotatoes.....	² 106.5	96.9	² 89.8	101.2
Fresh vegetables ¹	² 80.6	² 89.0	² 122.9	² 121.7
Canned and frozen fruits.....	² 140.7	² 112.9	² 59.7	² 59.9
Canned and frozen vegetables.....	² 139.8	² 110.0	² 44.1	² 74.6
Canned and frozen juices.....	102.1	98.0	93.2	103.8
Dried fruits and vegetables, nuts.....	² 128.9	101.0	² 63.9	² 84.6
Soups, prepared and partially prepared dishes.....	² 115.6	93.9	² 66.6	107.8

¹ The indexes for these food groups were obtained by weighting the seasonal indexes of the component items by their relative importance in spring 1948 urban food purchases.

² Significantly different from 100 at the 5 percent level.

pork were used in summer. More poultry and smoked ham was eaten in summer but city families ate more fish in winter.

These families used more eggs in spring and fewer in summer than in other seasons. This was partly because of the seasonal price and production patterns for eggs.

Sugars and sweets showed only moderate seasonal fluctuations, although consumption was highest in winter and lowest in spring and summer.

Bread was bought in about the same amounts the year round with a little more used in the fall than in the other three seasons. Pies, cakes, cookies, and other baked goods were more popular in winter; their use dropped off in spring and summer when ice cream and fruit desserts may have taken their place in family meals.

More flour and cereal foods were used in winter and less in summer.

Fats and oils were used in about the same amounts the year round.

What about the changes in nutritive value of these diets as the seasons changed? It was found that these changes were small compared with the

shifts in use of different food groups. For example, the average vitamin C content of city diets in each of the four seasons varied from the all-year average by less than 4 percent. Contributing to this stability is the fact that the consumption of vitamin-C rich fruit is at its peak when consumption of other fresh fruits and fresh tomatoes is at a seasonal low.

City families had slightly less nutritious diets in summer than during the rest of the year. The average number of calories in summer diets was 5.5 percent lower than the year's average. This was probably because of two things: (1) a shift to foods typical of summer menus; and (2) an actual decrease in the amount of food energy needed.

What about seasonal changes in the farm family diet? Well, these changes are probably greater than those in the average city diet but no information is available at present to measure them.

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Bureau of Agricultural Economics

Consumers Like New Apple Concentrates

Three of the new frozen concentrate apple juices are popular with consumers, according to preliminary results of a survey made in the San Francisco area.

Nine out of ten of the 690 people in 308 households who sampled the new juices made favorable comments about them. Many stressed the "natural" flavor and the "real apple" taste. The three juices were selected from among a dozen or more made from different varieties and combinations of apples and with different acid strengths.

Younger folks generally like a sweeter juice than adults, the survey showed. Among those under 21 years of age, the most popular of the three con-

centrates was straight-Delicious with 0.2 percent acidity. With adults, the most preferred juice was a blend containing 50 percent Delicious, 20 percent Winesap, 20 percent Jonathan, and 10 percent Rome Beauty and having 0.4 percent acidity. A straight-Delicious with 0.4 percent acidity ranked slightly lower in preference.

The survey was made by the Bureau of Agricultural Economics in cooperation with the Washington State Apple Commission and the Washington State College. The three juices tested were developed by the Bureau of Agricultural and Industrial Chemistry in its Western Region Laboratory in cooperation with the Washington Commission.

A Letter TO CROP REPORTERS

RECENT LETTERS from executives of two railroads to the Kansas Agricultural Statistician show how the country's 600,000 volunteer crop and livestock reporters are helping themselves and helping the Nation's business at the same time.

The first letter: "This will acknowledge, with thanks, receipt of your report covering stocks of various grains on hand as of January 1, 1951. Will also appreciate receiving copies of various reports issued about May or June

which will show the available grain storage by counties as this information should be of benefit in the handling of the 1951 grain crop."

The second letter: "It is essential that we continue to receive detailed information on crop and storage conditions in Kansas. This information is used as a basis for estimating our grain car requirements throughout the year, particularly at harvest time."

S. R. Newell
*Chairman, Crop Reporting Board
Bureau of Agricultural Economics*

Prefer Cotton for Children's Clothes

Cotton is the fiber preferred by a majority of mothers for 7 out of 10 items of children's clothing, according to a survey made by BAE.

In the survey, a national sample of 2,266 mothers with children under 13 years of age were interviewed in June, 1949. The items of clothing about which they were asked to express opinions included winter baby shirts, crib blankets, diapers, girls' winter bathrobes and one-piece summer dresses, boys' school shirts (woven and knitted) and pants, and children's summer anklets (or socks) and snowsuits. For most of the items, cotton was the only fiber with which the majority of the mothers reported any experience.

Wool was favored for snowsuits and winter crib blankets. Almost as many mothers chose cotton for disposable diapers as paper.

A substantial minority of the mothers interviewed chose a mixture of cotton and wool for winter crib blankets, and a somewhat smaller proportion chose the same mixture for winter baby shirts. A small but significant proportion of the mothers selected a mixture of rayon and cotton for children's summer anklets and socks.

The mothers were asked to give reasons for their fiber preferences. The characteristics most frequently men-

tioned in connection with each of the fibers were: cotton—laundryability and durability, wool—warmth and lightness of weight, wool-cotton mixture—warmth and laundryability, rayon-cotton mixture—good appearance, laundryability and durability.

In the case of snowsuits, mothers were asked to indicate whether they preferred a smooth or rough finish. Almost two out of every three expressed a preference for a smooth, hard finish. In general, mothers gave the same reasons for preferring the smooth or rough finish. For example, good laundering or cleaning characteristics and durability were claimed for both smooth and rough finishes. However, a larger proportion of the mothers said they thought a smooth finish had a better appearance.

Mothers were also questioned about the factors they consider in purchasing two of the items included in the study: snowsuits and anklets (or socks). Properties of the fiber and garment related to comfort and health appeared to be considered more often than any other when mothers selected snowsuits for their children. However, in the case of anklets or socks, appearance ranked first in order.

Rita Hausknecht
Bureau of Agricultural Economics

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Apr. 15, 1950	Mar. 15, 1951	Apr. 15, 1951	Effective parity price Apr. 15, 1951 ²
	Base period price 1910-14 ¹	January 1935- December 1939				
Basic commodities:						
Cotton (pound).....cents..	³ 12.4	10.34	28.74	42.73	43.17	33.73
Wheat (bushel).....dollars..	¹ .84	.837	2.01	2.12	2.14	2.40
Rice (cwt.).....do.....	¹ .97	1.65	4.30	5.79	5.73	5.58
Corn (bushel).....do.....	³ .642	.691	1.26	1.60	1.62	1.75
Peanuts (pound).....cents..	³ 4.8	3.55	10.6	10.8	10.8	13.1
Designated nonbasic commodities:						
Potatoes (bushel).....dollars..	⁵ 1.12	.717	1.32	1.07	1.12	⁶ 1.80
Butterfat (pound).....cents..	27.2	29.1	61.0	69.7	68.0	77.0
Milk, wholesale (100 lb.).....dollar	1.70	1.81	3.60	4.51	4.37	4.81
Wool (pound).....cents..	⁴ 2.1	23.8	53.2	119.0	113.0	56.9
Other nonbasic commodities:						
Barley (bushel).....dollars..	³ 619	.533	1.11	1.34	1.30	⁶ 1.51
Cottonseed (ton).....do.....	26.10	27.52	744.40	103.90	103.00	73.90
Flaxseed (bushel).....do.....	1.67	1.69	3.53	4.59	4.37	4.73
Oats (bushel).....do.....	³ .396	.340	.749	.909	.907	⁶ .981
Rye (bushel).....do.....	³ 720	.554	1.20	1.57	1.61	⁶ 1.76
Sorghum, grain (100 lb.).....do.....	³ 1.21	1.17	1.98	2.12	2.14	⁶ 2.96
Soybeans (bushel).....do.....	1.00	.954	2.48	3.10	3.12	2.83
Sweetpotatoes (bushel).....do.....	.908	.807	2.28	2.07	2.03	2.57
Beef cattle (100 lb.).....do.....	7.02	6.56	⁴ 21.90	29.70	30.20	19.90
Chickens (pound).....cents..	11.1	14.9	23.4	28.9	29.3	31.4
Eggs (dozen).....do.....	⁵ 21.5	21.7	30.9	43.7	43.1	⁶ 52.6
Hogs (100 lb.).....dollars..	7.57	8.38	⁴ 15.70	21.20	20.60	21.40
Lambs (100 lb.).....do.....	7.71	7.79	⁴ 24.10	35.00	34.30	21.80
Veal calves (100 lb.).....do.....	⁴ 7.84	7.80	⁴ 24.50	33.50	33.90	22.20
Oranges, on tree (box).....do.....	⁵ 2.29	1.11	2.30	1.94	1.77	⁶ 3.69
Apples (bushel).....do.....	1.02	.90	2.11	1.97	1.87	2.89
Hay, baled (ton).....do.....	8.58	11.20	21.40	23.10	23.10	24.30

¹ Adjusted base period prices 1910-14, based on 120-month average January 1941-December 1950 unless otherwise noted.

² Parity prices are computed under the provisions of title III, subtitle A, section 301 (a) of the Agricultural Adjustment Act of 1938 as amended by the Agricultural Acts of 1948 and 1949.

³ 60-month average, August 1909-July 1914.

⁴ Revised.

⁵ 10-season average 1919-28.

⁶ Transitional parity. 90 percent of parity price computed under formula in use prior to Jan. 1, 1950.

⁷ Relatively insignificant quantities sold for crushing this month.

Outlook Highlights

... MAY, 1951

Billion Bushel Wheat Crop

Despite a sharp drop in the prospects for winter wheat, total wheat production this year seems likely to rise above a billion bushels for the eighth consecutive year.

According to April 1 estimates, the winter wheat crop will total 727 million bushels, 173 million less than was forecast last December. If the acreage planted to spring wheat is as large as farmers intended on March 1 and yields are average, about 309 million bushels would be produced. This would give a total crop of 1,036 million bushels. Adding to this the 425 million bushels expected to be carried

over next July 1, would make the total supply for 1951-52 about 1,460 million bushels.

This year's crop, however, may be a little smaller than the amount of wheat that will be used in the United States and exported, thus pulling the carryover stocks on July 1, 1952, below this year's level.

Milk Prices Down

Farmers' prices for milk and butterfat fell less than seasonally from mid-March to mid-April. Further declines are likely during the flush production period but both will move higher later in the year.

Weather has been unfavorable for milk production and output during the first quarter was about 2 percent below the rate for the same period last year. If the weather is at least average, pro-

(Continued on page 16)

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Total income of industrial workers (1935-39=100) ²	Average earnings of factory workers per worker (1910-14=100)	Whole-sale prices of all commodities (1910-14=100) ³	Index numbers of prices paid by farmers (1910-14=100)			Index numbers of prices received by farmers (1910-14=100)			
					Com-modities	Wage rates for hired farm labor ⁴	Com-modities, interest, taxes, and wage rates	Livestock and products			
								Dairy products	Poultry and eggs	Meat animals	All live-stock
1910-14 average.....	58	50	100	100	100	100	100	100	100	100	100
1915-19 average.....	72	90	152	158	149	147	148	147	153	162	157
1920-24 average.....	75	122	221	160	159	181	168	159	163	121	140
1925-29 average.....	98	129	232	143	151	184	161	161	155	145	152
1930-34 average.....	74	78	179	107	117	121	124	105	94	83	91
1935-39 average.....	100	100	199	118	124	121	125	119	108	117	115
1940-44 average.....	192	236	315	139	148	211	152	169	145	166	162
1945 average.....	203	291	389	154	179	359	189	230	194	207	210
1946 average.....	170	276	382	177	197	387	207	267	197	248	241
1947 average.....	187	328	436	222	230	419	239	272	219	329	287
1948 average.....	192	354	472	241	250	442	259	300	235	361	314
1949 average.....	176	325	478	226	240	430	250	251	219	311	272
1950 average.....	200	367	516	236	246	432	255	247	181	340	278
1950.....											
April.....	110	340	496	223	240	424	250	235	161	312	256
May.....	195	349	502	228	244	-----	254	230	154	342	269
June.....	199	362	513	230	245	-----	255	227	156	342	268
July.....	196	366	516	238	247	-----	256	232	173	371	287
August.....	209	392	526	243	248	-----	258	240	191	369	292
September.....	211	396	529	247	252	-----	260	248	196	372	298
October.....	216	405	540	247	253	-----	261	261	201	358	296
November.....	214	406	544	251	255	-----	263	267	209	357	299
December.....	217	416	556	256	257	-----	265	272	249	360	311
1951.....											
January.....	221	415	555	263	262	450	272	286	203	391	323
February.....	221	418	558	268	267	-----	276	285	205	425	340
March.....	-----	-----	-----	269	272	-----	280	280	217	428	343
April.....	-----	-----	-----	-----	273	479	283	273	215	428	340

Year and month	Index numbers of prices received by farmers (1910-14=100)								All crops and live-stock	Parity ratios ⁶
	Crops									
	Food grains	Feed grains and hay	To- bacco	Cotton	Oil- bearing crops	Fruit	Truck crops	All crops		
1910-14 average.....	100	100	100	100	100	100	-----	100	100	100
1915-19 average.....	193	161	183	175	201	126	-----	171	164	111
1920-24 average.....	147	125	189	197	155	157	152	162	150	89
1925-29 average.....	141	118	169	150	135	146	145	143	148	92
1930-34 average.....	70	76	117	77	78	98	104	84	88	71
1935-39 average.....	94	95	172	87	113	95	95	99	107	83
1940-44 average.....	123	119	241	138	170	150	164	145	154	101
1945 average.....	172	161	360	178	228	244	207	203	206	109
1946 average.....	201	196	376	237	260	250	182	227	234	103
1947 average.....	270	249	374	272	363	212	226	263	275	115
1948 average.....	250	250	380	270	351	174	214	252	285	110
1949 average.....	219	170	398	245	242	199	201	223	249	100
1950 average.....	224	187	402	280	276	200	185	232	256	100
1950.....										
April.....	227	181	389	242	239	206	205	225	241	96
May.....	230	190	387	246	248	195	178	223	247	97
June.....	211	190	388	251	254	207	182	225	247	97
July.....	226	195	387	278	267	211	200	236	263	103
August.....	224	193	399	311	293	206	164	239	267	103
September.....	221	194	428	336	303	217	126	243	272	105
October.....	219	188	426	327	300	207	138	238	268	103
November.....	224	192	428	346	351	194	188	250	276	103
December.....	233	202	436	339	366	202	211	258	286	108
1951.....										
January.....	240	214	442	347	374	192	324	275	300	110
February.....	254	222	440	351	379	204	333	283	313	113
March.....	245	221	437	359	386	202	265	276	311	111
April.....	247	222	438	363	385	209	225	275	309	109

¹ Federal Reserve Board; represents output of mining and manufacturing; monthly data adjusted for seasonal variation.

² Computed from data furnished by Bureau of Labor Statistics and Interstate Commerce Commission on pay rolls in mining, manufacturing, and transportation; monthly data adjusted for seasonal variation. Revised January 1950. ³ Bureau of Labor Statistics.

⁴ Farm wage rates simple averages of quarterly data, seasonally adjusted. ⁵ Revised.

⁶ Ratio of index of prices received to index of prices paid, interest, taxes, and wage rates. This parity ratio will not necessarily be identical to a weighted average percent of parity for all farm products, largely because parity prices for some products are on a transitional basis. ⁷ 1924 only.

Outlook Highlights

(Continued from page 14)

duction will be nearer that of a year earlier in coming month.

More Meat Expected

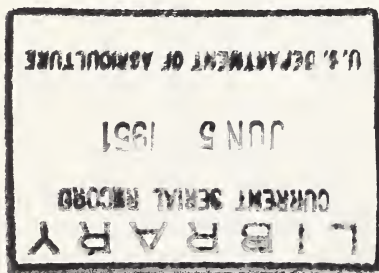
Meat production the first quarter of this year ran a little ahead of the same period of 1950. During the rest of the year, the margin over 1950 will be a little larger. Total consumption for 1951 is expected to be 2 to 3 pounds per person above the 145 pounds for 1950.

Bigger Tobacco Exports

Export demand for United States tobacco, especially flue-cured, is expected to be active and shipments abroad are likely to exceed the 1950 total of 476 million pounds. The improved dollar situation in many foreign countries and the lack of supplies elsewhere favor our export prospects.

Defense Spending Up

Expenditures for National defense and related programs were at an annual rate of 25½ billion dollars in the first quarter of 1951. This was about double the rate for the second quarter of 1950 when the Korean war began. Spending is expected to again double by the end of 1951.



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